

A Team Based Approach to Improving Hypertension Care

May 1, 2013

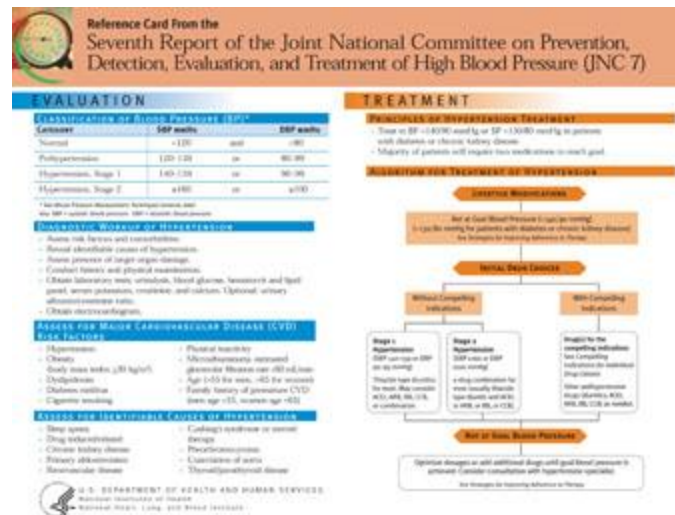
CVH & Diabetes Program Stakeholder Meeting

Patricia Ward

Libby Collet

Theme: Hypertension

Diagnosis: For newly diagnosed patients the requirement set forth in the JNC7 guidelines will be followed



The classification is based on the average of two or more properly measured, seated, BP readings on each of two or more office visits.

Theme : Improving Hypertension Care

“In today’s world every health care professional really has two jobs – doing the work and improving the work.”¹

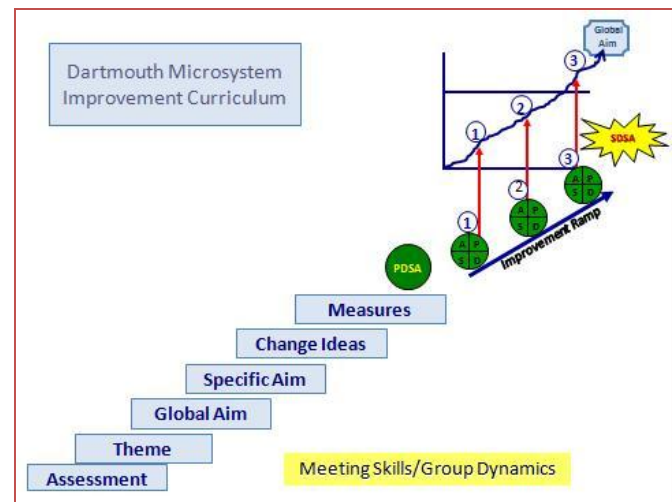
Global Aim: We aim to improve cardiovascular health outcomes in Pod 7-4. The process begins with the first blood pressure taken. The process ends with the patient’s transfer out of the practice or death.

1. Quality By Design: A Clinical Microsystems Approach edited by Eugene C. Nelson, Paul B. Batalden, Marjorie M. Godfrey, 2007

Dartmouth Microsystem Tools

- Applying improvement science to develop a team based approach to improving clinical outcomes for patients with hypertension.

Microsystem tools were selected based in part on the premise that asking the people who do the work to improve the work leads to reliable improvement.



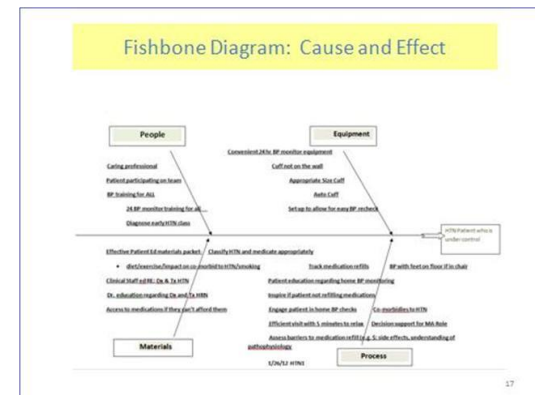
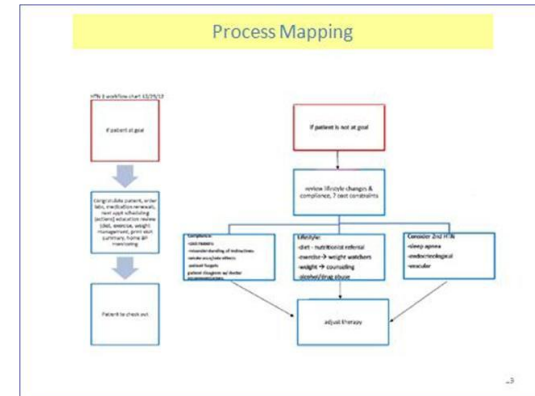
Pre Phase Included

- ☐ Team selection
- ☐ Implement meeting tools
- ☐ Guiding principles
- ☐ Assess the context
- ☐ Preliminary data
- ☐ Clarity of aim
- ☐ Logistics

HTN 1 Team	Role	Advisory Members	Role
Peter Emery, MD	Team Leader	Barbara Coulombe	Sr. Healthcare Analyst
	Internal Medicine	Jeanne Place	Central Intake Manager
Sarah Rogan	Medical Assistant	Anne Hindley	Payer Issues Expert
Sarah Anania	Medical Assistant	Paul McGrath, MD	Cardiologist
Allison James	Medical Assistant	Elizabeth Foley	ME CDC Cardiovascular Health Specialist
Patty Ward	Clinical Quality Coordinator	Susan Quimby	Nutritionist / Nutrition Works Owner
Libby Collet	Microsystem Coach		

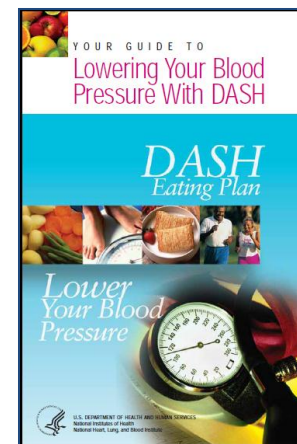
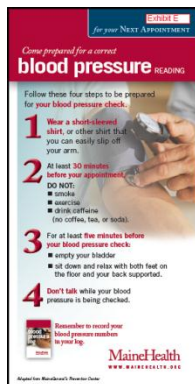
Action Phase Included

- ☐ Drafting a global aim
- ☐ Change concepts
- ☐ Process mapping
- ☐ Creating a fishbone diagram
- ☐ Developed a specific aim
- ☐ Plan * Do * Study * Act
- ☐ Group dynamics
- ☐ Measurement
- ☐ Celebrate successes
- ☐ Sustainability



First Test of Change: Patient Education Materials

Specific Aim: We will increase the number of patients who receive effective patient education materials by distribution by care team of approved hypertension patient education tools (to include video link) to 3 patients per provider per week for the next month, including a request for feedback. We will have 15% of patients who are surveyed indicate in a follow up communication that they received information that was of value to them.



78% of the patients contacted found value in the information provided.

Shift In Focus to Accuracy of Measurement

Taking routine blood pressures:

"Blood pressure determination is one of the most important measurements in all of clinical medicine and is still one of the most inaccurately performed. Standardized measurement and ultimately standardized management should be a goal for our patients.".....Paul McGrath M.D.

Impact of Errors

Cost of
Overestimating
by 5mmHg

Inappropriate
tx of 50 million
people

\$1,000/per yr
per pt if treated
unnecessarily

Medication
side effects

Could double #
of HTN pt

Cost of
Underestimating
by 5mmHg

21 million
people
undetected
HTN

125,000 will
have CAD
related death if
untreated -
5yrs

20% could
have been
prevented

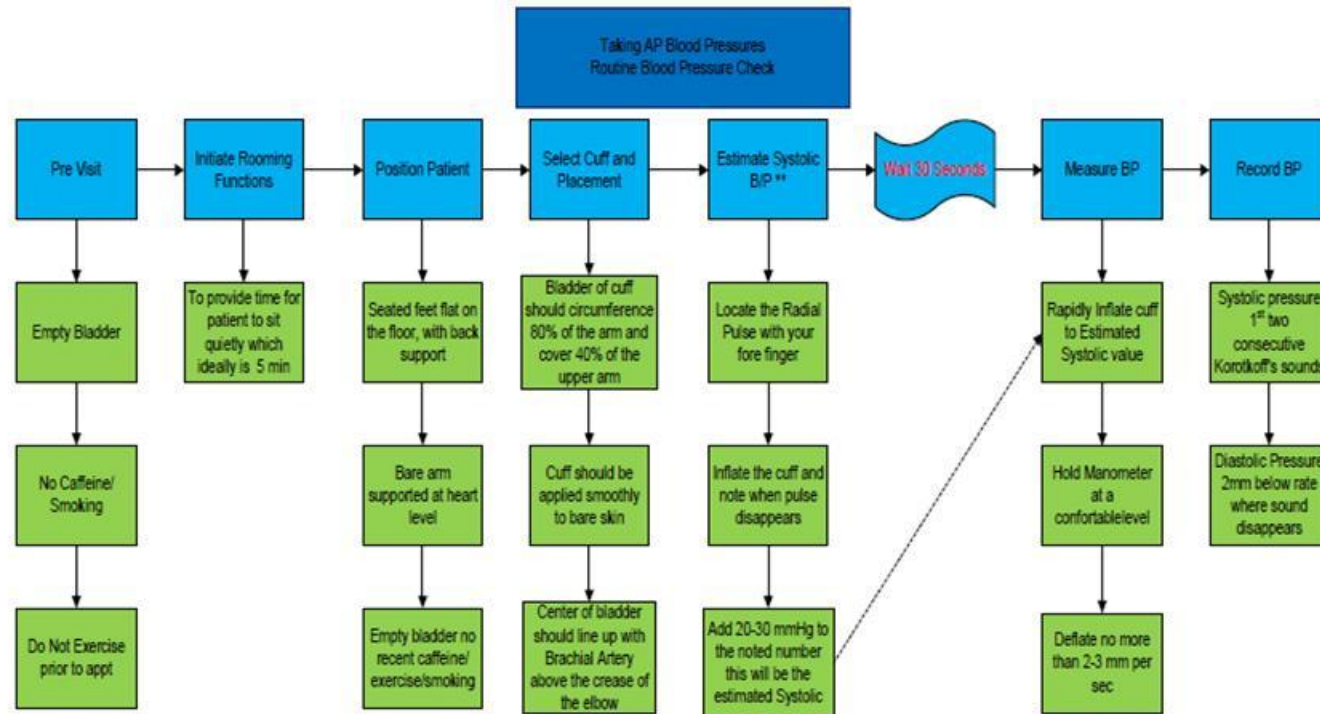
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MAINE
CARDIOVASCULAR
HEALTH COUNCIL
Improving Cardiovascular Health
Through Collaboration

Cumulative Effects of Errors

Common Errors	Effect on systolic BP	CORRECTIVE ACTION
Sitting without back support	+ 6 to 10	Support back (sit in chair)
Full bladder	+ 15	Empty bladder prior to BP is taken
Tobacco/caffeine use	+ 6 to 11	Don't use before clinic appointment
BP taken when arm is: • Incorrect position • Unsupported • Elbow too high • Elbow too low	• + 9 to 13 • + 1 to 7 • + 5 • False low	While seated in chair, patient's arm must be supported, with elbow at heart level
"White coat" reaction	+ 11 to 28	Have someone else take the BP
Talking or hand gestures	+ 7	No talking or using hands during BP measurement
Cuff too narrow/small	+ 8 to 10	Place the correct-sized cuff properly AND Place it over a bare upper arm
Cuff too wide/large	False low	
Cuff not centered	+ 4	
Cuff over clothing	+ 5 to 50	

Spread Throughout the Practice

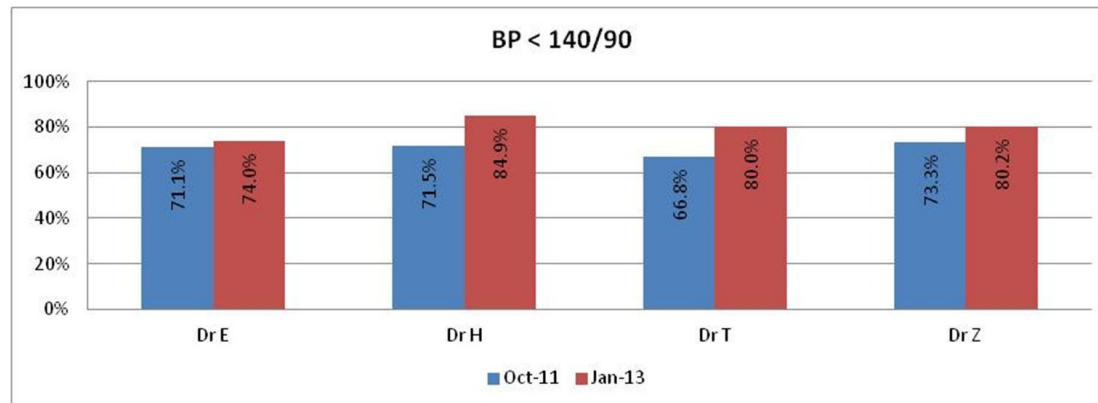


** Estimating Systolic B/P is important to get the most accurate B/P reading by avoiding the auscultatory gap. An auscultatory gap also called as silent gap is the interval of pressure where korotkoff sounds indicating true systolic pressure fade away and reappear at a lower pressure point during the manual measurement of blood pressure by auscultatory method. The auscultatory gap occurs when the first Korotkoff sound fades out for about 20-50 mmHg only to return. It can result in following erroneous blood pressure reading: Underestimation of systolic blood pressure or Overestimation of diastolic blood pressure

Change in Clinical Outcomes

The overall AIM of the pilot is to improve cardiovascular health outcomes. The data below suggests that we are moving in that direction.

- The percent of patients with hypertension with a recent blood pressure measurement of < 140/90 has increased from 71.5% at the start of the pilot to 79.4% in March 2013.
- The percent of patients with hypertension with a recent blood pressure measurement > 160/100 has decreased from 3.5% at the start of the pilot to 1.4% in March 2013.



We will continue to track the data once the training is complete, to confirm that the nature of any inaccuracy in the baseline data was not such as to negate the significance of the trend. We have found no indication that the bias results in a higher or lower overall population measure.

Ongoing Areas of Focus

- Pharmacy Integration
 - Pharmacists on Team
 - MTM Pilot
 - Outreach Letter
 - Office System Communication Review
- Nutrition Integration
 - Nutritionist on Team
 - Nutrition Presentation
 - Referral Pilot
 - Outreach Letter
 - Developing Nutrition Tips for Data Wall and Newsletter